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ABSTRACT

Psychological well-being following mastectomy is a concern of rehabilitation psychologists as the life expectancy of women treated for breast cancer is increasing. Well-being can be threatened by stress that these women may suffer from the diagnosis of cancer and amputation of a significant body part. A study was conducted to examine the hypothesis that enhanced adjustment would be associated with particular demographic characteristics, the availability of emotional and physical support, and specific coping processes. Participants (N=55), selected from mastectomy self-help groups, were cancer-free for at least one year. A biological questionnaire, the General Well-Being Schedule, Ways of Coping Checklist, and Acceptance of Disability Scale were used as assessment tools. Women who had had more recent mastectomies reported more emotional support. The coping process of wishful thinking predicted poorer well-being and less disability acceptance. Seeking social support predicted poorer well-being. Wishful thinking and seeking social support were used more by younger women. Length of time since the mastectomy was found to be important both in psychological and physical healing, while the availability of emotional support was the strongest predictor of well-being. Marital status, length of marriage, and income were not predictive of any outcome. (ABL)

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Coping after Mastectomy: Antecedents and Outcomes

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Abstract

Psychological well-being following mastectomy is a concern of rehabilitation psychologists as life expectancy of treated individuals increases. Well-being can be threatened by stress, which results not only from the diagnosis of cancer, but from treatments that involve the amputation of a significant body part. The value of a stress and coping model in formulating intervention strategies is illustrated by a study that employed such a framework. The relative importance of 1) demographic characteristics (age, marital status, length of marriage, income, and time since mastectomy), 2) availability of emotional and concrete, physical support, and 3) coping processes on psychosocial outcome was assessed. Problem- and emotion-focused coping strategies, treated as mediating variables, were assessed with the Ways of Coping Checklist (Folkman & Lazarus, 1980). Coping processes were viewed as being affected by the demographic and support variables, and in turn, affecting disability acceptance and psychological well-being, the outcome variables. A poor sense of well-being was predicted by seeking social support and using wishful thinking as coping processes; unavailable emotional support; and fewer years post-mastectomy. Disability acceptance was predicted only by minimal use of wishful thinking. Only two coping processes were predicted by demographic and support variables; wishful thinking was predicted by minimal availability of concrete support and being younger, while seeking social support was predicted by being younger. Finally, emotional support was predicted by being fewer years post-mastectomy. The implications of these findings for enhancing the psychological well-being of women after mastectomy are discussed.

Coping after Mastectomy: Antecedents and Outcomes

Cancer is considered to be one the most threatening health risk in our society (Schmale, 1976). The diagnosis of cancer evokes far greater emotional distress than any other disease, regardless of mortality rate or treatment method (Stehlin & Beach, 1966). Breast cancer is the most common malignancy among women; 1 woman in 14 will develop breast cancer (Goin & Goin, 1981).

Quality of life following mastectomy is a concern of psychologists as life expectancy of treated individuals increases. Women who are physically healthy may have impaired psychological functioning after treatment. Stress results not only from the diagnosis of cancer, but from treatments that involve the amputation of a significant body part. Loss of femininity and sexual attractiveness are often reported as major concerns. A recent Gallup poll found that over half of the women interviewed said that breast amputation would cause a loss of femininity (Gallup, 1975).

Time since mastectomy, age, marital status and duration, and social support have been found to be related to post-mastectomy adjustment (Morris, Greer & White, 1977; Rosser, 1981). Specifically, reports of stress decline with time following mastectomy (Morris, Greer & White, 1977); older women tend to adjust more easily than do younger women (Jamison, Wellisch & Pasnau, 1978); and support from spouse, family and friends allows women to adjust more easily (Holland & Mastrovito, 1980). However, negative consequences of emotional support have been reported (Revenson, Wollman, & Felton, 1983).

The role of marital status in post-mastectomy adjustment is more equivocal as most women studied have been married; however, support from important others can promote more favorable outcomes (Witkin, 1978). Finally, researchers speculate that higher social status provides women with greater resources to deal with mastectomy (Silberfarb, Maurer & Crouthamel, 1980;

Vorherr, 1980); however, little empirical data supports this finding due to the relatively homogeneous samples studied.

Coping processes used to deal with mastectomy have also been investigated (Meyerowitz, Heinrich & Schag, 1983). While definitions of coping differ, the one preferred here is a transactional model developed by Richard Lazarus (1966, 1982). His stress and coping model (Lazarus & Folkman, 1984) focuses on adaptive characteristics of individuals that are responsible for success in dealing with life-threatening situations. Coping is defined as the cognitive and behavioral efforts used to manage demands appraised as taxing the individual's adaptive resources. This model can be applied to women following mastectomy to assess factors related to adjustment.

Lazarus & Launier (1978) identified five modes of coping: information seeking, direct action, inhibition of action, intrapsychic or cognitive processes, and turning to others for help. This can be conceptualized as two major categories: palliative or emotion-focused, and instrumental or problem-focused. Felton and Revenson (1984) found that information seeking had a salubrious effect on adjustment following chronic illness, while wish-fulfilling fantasies had deleterious consequences. Similarly, Zemore, Shepel, Jardine & Sefton (1983) found that information-seeking was positively associated with adjustment after mastectomy.

This theoretical model and research support led us to test the hypothesis that enhanced adjustment would be associated with specific demographic characteristics (age, marital status, length of marriage, income, and time since mastectomy), 2) availability of emotional and concrete, physical support, and 3) coping processes. We predicted that older women who are married for a longer period of time, who have greater incomes and had mastectomies longer ago would have greater emotional and concrete support

available from existing sources. In turn, greater support and use of problem-focused coping processes would be associated with enhanced adjustment.

These variables were incorporated in a model for predicting psychological outcome following mastectomy, as presented in Figure 1. Psychological well-being and non-devaluing acceptance of self despite mastectomy are used as indicators of adjustment in this model. The sample used to test the hypothesized model was drawn from members of self-help groups formed for women with breast cancer in the greater Chicago area. While not representative of all women with breast cancer, this sample provides a critical opportunity to assess this model with women who seek social support and who may have deficits in existing support networks.

Method

Participants: The sample was composed of 55 mastectomy self-help group members who were cancer-free for a minimum of one year. Women were notified of the study through a newsletter from one group, and through a personal letter mailed to members of another group. Interested women contacted the investigator by mail of telephone for more information and to participate.

Instruments: A biographical questionnaire, the General Well-Being Schedule, Ways of Coping Checklist, and Acceptance of Disability scale were used. The biographical questionnaire assessed age, income, marital status, length of marriage, and time since most recent surgery in years. Availability of emotional and concrete support was assessed by asking the participants to rate how often 1) their husband (or partner), 2) friends and 3) family provided a) emotional support and b) assistance with household tasks such as chores, babysitting and housework. Ratings were made on a five-point scale from always available (5) to never available (1). The three items for each

scale were summed to yield two composite scores.

The Ways of Coping Checklist - Revised (Folkman & Lazarus, 1980) is a 66-item scale containing a wide range of thoughts and actions that people use to deal with taxing events. It assesses coping processes used to deal with specific stressful events, in this study, mastectomy. Ratings are made on a four point scale of not used (0) to used a great deal (3). Eight factors were identified in a study of young adults, each of whom completed the questionnaire three times (Lazarus & Folkman, 1984). Items comprising these factors were summed to yield separate subscale scores. The factors are labeled 1) problem-focused coping, 2) wishful thinking, 3) detachment, 4) seeking social support, 5) focusing on the positive, 6) self-blame, 7) tension-reduction, and 8) keep to self.

Dupuy's General Well-Being Schedule (Rand Corporation, 1983) is a 43 item scale that assesses feelings and behaviors that occurred during the past month. A six point response continuum is used to asses the range of potential responses. It provides a measure of global mental health as well as several subscales that correlate highly with the Spielberger State Anxiety Scale and the Beck Depression Inventory. The discriminant capacity of the scale was demonstrated on the basis of comparisions with psychiatric evaluations and the later use of psychiatric services. We selected this Schedule because it was developed for use with the general public.

The Acceptance of Disability Scale (ADS; Linkowski, 1971) is a 50 item, self-report measure employing a Likert-type response format that assesses values theorized by Wright (1983) to be associated with disability acceptance. Content validity was determined through expert opinion. It correlates highly with measures of self-esteem in persons with disabilities. The measure is internally consistent and demonstrates evidence of convergent validity.

"Mastectomy" was substituted for "disability" throughout the scale to target specific values associated with mastectomy.

Hypothesized Model

Path analysis was used to test the relationships hypothesized in Figure 1. This analysis employed Alwin and Hauser's (1975) method to decompose predictor variables into direct, indirect, and joint or spurious effects. All effects in the model were estimated by ordinary least squares regression. Whereas direct effects are unmediated, indirect effects occur when the effect of one variable on another is mediated by a third variable. For example, years post-mastectomy is hypothesized to have an indirect effect on psychological well-being that is mediated by availability of emotional support. Joint or spurious effects refer to the proportion of the zero-order correlation between two variables due to the correlation of the predictor variable with preceding variables in the model or to the common influence of variables not included in the model. For example, the effect of marital status on concrete support could be due to its correlation with years married. Were this the case, controlling for years married would indicate that marital status had little or no independent effect on concrete support.

Results

Descriptive Statistics

The sample ranged in age from 29 to 85 years with a mean age of 58.7 years (SD=13.0). A median family income range of $26,000 to $30,000 was reported. Never married, separated, widowed and divorced women were categorized as single, and comprised 39% of the sample; the rest (61%) were married. The mean duration of marriage for these women was 21.7 years (SD=18.5). Time since last breast surgery ranged from 1 to 16 years, with a mean duration of 7.1 years (SD=6.0). Table 1 lists means and standard

deviations for all predictor and criteria variables.

The majority of the sample reported unilateral, modified mastectomies. Others reported unilateral, radical mastectomies (27%); unilateral, simple (8%); bilateral, modified (8%); and bilateral, radical (3%). The remainder did not know their type of surgery. Recurrence of cancer was reported by only 12% of the sample.

Path Analysis

The direct effects of each predictor are listed in Figure 2. Only direct effects are listed here to simplify data presentation. Only two of the predicted relationships were confirmed: 1) concrete support had a direct effect on wishful thinking (beta=-.31, $p<.05$); and 2) years post-mastectomy had a direct effect on emotional support (beta=-.56, $p<.01$). However, income, marital status and years married had no direct effects on the support measures, and problem-focused had no effect on well-being or disability acceptance. Instead, wishful-thinking (beta=-.42, $p<.01$) and seeking social support (beta=-.28, $p<.05$) had direct effects on well-being; and wishful thinking had a direct effect on disability acceptance (beta=-.43, $p<.05$). Other unexpected findings were that age had a direct effect on wishful thinking (beta=-.38, $p<.05$) and seeking social support (beta=-.47, $p<.01$); emotional support had a direct effect on well-being (beta=.70, $p<.001$); and years post-mastectomy had a direct effect on well-being (beta=.33, $p<.05$).

The 15 predictor variables accounted for 65.0% of the total adjusted variance in well-being, $F(15,39)=7.68$, $p<.001$, and 27.0% of the variance in disability acceptance, $F(15,39)=2.33$, $p=.02$. The seven predictors of problem-focused coping, detachment, focusing on the positive, self-blame, tension reduction, and keeping to self accounted for an insignificant proportion of the total adjusted variance in each of these criteria. The predictors of

wishful thinking accounted for 28.1% of the total adjusted variance, $F(7,47)=4.02$, $p=.002$, and 6.8% of the variance in seeking social support, $F(7,47)=1.56$, p, NS. Finally, the five predictors of emotional support accounted for 21.4% of the total adjusted variance, $F(5,49)=3.93$, $p=.005$. An insignificant amount of variance was accounted for by the five predictors of concrete support.

Discussion

The results supported some hypotheses but were inconsistent with others. As expected, women who had mastectomies more recently reported more emotional support was available from their spouses, families and friends. In addition, women who reported less concrete support was available tended to use wishful thinking as a coping process. While problem-focused coping was unrelated to well-being or to disability acceptance, two emotion-focused coping processes were related. Wishful thinking predicted poorer well-being and less disability acceptance, while seeking social support predicted poorer well-being. Unexpectedly, age, years post-mastectomy, and emotional support had direct effects that were not mediated by intervening variables. Younger women tended to cope by wishful thinking and by seeking social support; and women reporting that more emotional support was available had a greater sense of well-being. While this last finding is consistent with earlier reports (Holland & Mastrovito, 1980), the effect was not mediated by coping process.

These results should be interpreted somewhat cautiously because of the relatively small sample size and the limited geographical distribution of the sample. Participants were self-selected and their reasons for participating could affect the results. Nevertheless, most variables had considerable variability, suggesting that a cross-section of self-help group members were

assessed. Other limitations result from the use of scales with unknown reliability and validity. Items assessing emotional and concrete support were devised for this study; while they possess face validity, we have not assessed criterion-related validity. Finally, the statistical tests used to assess the significance of beta weights are only approximate and thus should not be interpreted as precise values (Wilkerson, 1979).

In any case, the findings are consistent with models of post-mastectomy adjustment that relate 1) years post-mastectomy and 2) emotional support to adjustment. The importance of time in psychological healing as well as physical healing following mastectomy is underscored by these findings. The critical role of social support is also evident. In fact, availability of emotional support was the strongest predictor of well-being. The role of self-help groups in promoting adjustment is apparent.

Unexpectedly, marital status, per se, length of marriage, and income were unrelated to any outcome. This finding is consistent with investigators who find no relationship between these variables and adjustment. Emotional and concrete, physical support depended on factors other than those we measured. It may be that formal and informal support networks formed independent of age, social status and marital status allowed women to deal effectively with mastectomy-related needs. Interestingly, it was only the availability of emotional support, not concrete, physical assistance, that was related to well-being.

Finally, the critical role of emotion-focused, rather than problem-focused coping processes, is apparent in how women dealt with mastectomy. Wishful thinking and seeking social support were each related to a poor sense of well-being, while wishful thinking was associated with low disability acceptance. These processes may preclude positive adjustment by maintaining

dependency and minimizing opportunities to deal effectively with the reality of body loss and cancer recurrence. Since women who did not have concrete, physical assistance available were those who used wishful thinking, developing support networks that provide concrete support could enhance a sense of well being by diminishing the use of wishful thinking.

In sum, these data suggest that 1) there are age-related differences in coping processes; 2) social support is critical in promoting adjustment following mastectomy; 3) intrapsychic coping processes are critical in dealing with body loss and life-threatening illness; and 4) psychological healing following mastectomy is a process that occurs over time. Self-help groups can play a critical role in providing social support for women with insufficient support. Rehabilitation psychologists and other professionals can promote adjustment following mastectomy by promoting coping processes that encourage timely reality confrontation and self-reliance.

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Table 1

Descriptive Statistics for Predictor and Criteria Variables

Variable	Mean	Standard Deviation
Psychological Well-Being	176.9	32.0
Disability Acceptance	260.3	34.5
Problem-Focused Coping	15.3	7.4
Wishful Thinking	4.2	4.1
Detachment	6.6	3.7
Seek Social Support	10.1	4.8
Focus on Positive	7.2	2.9
Self-Blame	2.7	2.5
Tension Reduction	2.3	1.8
Keep to Self	2.3	1.9
Concrete Support	9.6	4.4
Emotional Support	5.0	2.5
Age	58.7	13.0
Years Married	21.7	18.5
Years Post-Mastectomy	7.1	6.0

Figure 1

Model of Coping Following Mastectomy

Figure 2

Direct Effects of Predictor Variables on Post-Mastectomy Adjustment